Exhibit R-2, RDT&E Budget Item Justification: PB 2021 United States Special Operations Command	Date: February 2020
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*

COST ($ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	468.664	40.600	72.626	59.882	-	59.882	51.099	46.417	71.523	74.667	Continuing	Continuing
S0417: *Underwater Systems*	427.546	26.064	45.205	43.154	-	43.154	38.054	36.186	61.474	64.739	Continuing	Continuing
S1684: *Surface Craft*	41.118	14.536	27.421	16.728	-	16.728	13.045	10.231	10.049	9.928	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element provides for engineering and manufacturing development (EMD) of Special Operations Forces (SOF) Surface and Undersea Mobility platforms. This program element also provides for pre-acquisition activities to quickly respond to new requirements for SOF surface and undersea mobility, looking at multiple alternatives to include cross-platform technical solutions, service-common solutions, Commercial-Off-The-Shelf technologies, and new development efforts.

The Underwater Systems project provides for EMD of combat submersibles, SOF combat diving systems, underwater support systems, and underwater equipment. This project also provides for pre-acquisition activities (material solutions analysis, advanced component, prototype development, and exploitation of emerging technology opportunities to deliver enhanced capabilities) to respond to emergent requirements. These submersibles, equipment, and diving systems are used by SOF in the conduct of infiltration/extraction, personnel/material recovery, hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other missions. The capabilities of the submersible systems, diving systems, and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions.

The Surface Craft project provides for EMD of medium and heavy surface combatant craft, combatant craft mission equipment, and pre-planned product improvement and technology insertion engineering changes to meet the unique requirements of SOF. This project element also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to quickly respond to new requirements for maritime craft and subsystems. The craft capabilities and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct operations associated with SOF maritime missions. These technologies will be pursued via rapid prototyping efforts when appropriate.

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 United States Special Operations Command	Date: February 2020
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*

B. Program Change Summary ($ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	42.471	72.626	61.921	-	61.921
Current President's Budget	40.600	72.626	59.882	-	59.882
Total Adjustments	-1.871	0.000	-2.039	-	-2.039
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-3.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	3.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.351	-			
• SBIR/STTR Transfer	-1.520	-			
• Other	-	-	-2.039	-	-2.039

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2019	FY 2020
Project: S0417: *Underwater Systems*		
Congressional Add: *SOF Combat Diving*	-	3.000
Congressional Add Subtotals for Project: S0417	-	3.000
Congressional Add Totals for all Projects	-	3.000

Change Summary Explanation

Funding:

FY 2019: Net decrease of $1.871 million is due to a transfer to Small Business Innovative Research/Small Business Technology Transfer (SBIR/STTR) (-$1.520 million) and funds made available to support critical emerging Command requirements in the year of execution (-$0.351 million).

FY 2020: Net zero is due to a Congressional Directed Reduction which was a decrease within the Dry Combat Submersible (-$3.000 million) and a Congressional Add increase for SOF Combat Diving ($3.000 million).

FY 2021: Net decrease of $2.039 million is due to an increase to align Tech Insertion Roadmap (TIR) for combatant craft systems for enhanced Global Positioning System (GPS), survivability and hybrid power study; SOF Peculiar Unmanned Underwater Vehicle (UUV) payloads; and integration of Maritime Precision Engagement (MPE) prototype on Combatant Craft Medium (CCM) test article ($3.004 million), and Dry Combat Submersible (DCS) funding was made available to support critical emerging Command requirements (-$0.450 million).

Exhibit R-2, RDT&E Budget Item Justification: PB 2021 United States Special Operations Command	Date: February 2020
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*

For the Defense Wide Review (DWR), USSOCOM performed a comprehensive analysis of future capabilities which reduces the product development and integration of the Combatant Craft Heavy (CCH) program to better align with the Department's priorities as outlined in the National Defense Strategy (-$4.593 million).

Schedule: None.

Technical: None.

Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command			Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / *Maritime Systems*	Project (Number/Name) S0417 / *Underwater Systems*	

COST ($ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
S0417: *Underwater Systems*	427.546	26.064	45.205	43.154	-	43.154	38.054	36.186	61.474	64.739	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for engineering and manufacturing development of combat underwater submersibles, Special Operations Forces (SOF) combat diving systems, underwater support systems, and underwater equipment. This project also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to respond to emergent requirements. These submersibles, equipment, and diving systems are used by SOF in the conduct of infiltration/ extraction, personnel/material recovery, hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other missions. The capabilities of the submersible systems, diving systems, and unique equipment provides small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions. These technologies will be pursued via rapid prototyping efforts when appropriate.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
Title: Shallow Water Combat Submersible (SWCS)	1.397	1.395	1.411
Description: SWCS provides for the design, development, and test of one Engineering Development Model (EDM) and 10 production units to replace the legacy MK 8 MOD 1 Seal Delivery Vehicle (SDV) system. SWCS is a free-flooding combat submersible mobility platform suitable for transporting and deploying SOF and their payloads for a variety of SOF missions. SWCS will be deployable from a Dry Deck Shelter (DDS), surface ships, and land. The SWCS system includes the SWCS vehicle and SWCS support equipment, comprised of Mission Support Equipment (MSE), Pack-Up Kit (PUK), and Transportation and Handling (T&H). It also includes integration efforts with the current Dry Deck Shelter (DDS) and development of product improvements accomplished throughout the lifecycle of the system. ***FY 2020 Plans:*** Continue Operational Testing and Preplanned Product Improvements (P3I). P3I enhancements include, but are not limited to, Propulsor, Acoustic and Radio Frequency indicators and warning capabilities, Electro-Optical (EO)/Infrared (IR) sensor development, and self recovery. ***FY 2021 Plans:*** Continues P3I. P3I enhancements include, but are not limited to, Propulsor, Power and Energy, Acoustic and Radio Frequency indicators and warning capabilities, EO/IR sensor, payload improvements, and self recovery. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** Increase of $0.016 million is due to continued support of ongoing and planned P3I enhancements.			
Title: Dry Combat Submersible (DCS)	14.462	16.209	17.292

Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S0417 / *Underwater Systems*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
Description: DCS provides for the advanced development, engineering, manufacturing, and testing efforts for a surface-launched, dry, diver lock-in/lock-out vessel capable of inserting and extracting SOF and/or payloads into denied areas of one Engineering and Manufacturing Development (EMD) and two production units. USSOCOM tested one submersible prototype to validate test methodologies, commercial classification, and SOCOM safety certification processes and will continue to use the prototype to evaluate capability enhancing technologies and reduce risk in the DCS program. This program includes funding for enhanced warfighter capabilities such as Mid-Water Column Lock-In/Lock-Out, depressurization pump, and submarine interoperability. ***FY 2020 Plans:*** Continue the incorporation of P3I to increase the operational capability of DCS. Complete developmental and begin operational testing on DCS 1. Complete government acceptance testing on DCS 2. Begin DCS Block II EMD efforts. ***FY 2021 Plans:*** Continues the incorporation of P3I to increase the operational capability of DCS. Begins government acceptance testing on DCS 3. Continues DCS Block II EMD efforts. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** Increase of $1.083 million is due to DCS shifting to Block II.			
Title: Dry Deck Shelter (DDS) Modernization	8.221	5.278	1.206
Description: DDS provides for the pre-planned product improvements, testing, and integration of specialized underwater systems to meet the unique requirements of SOF, and compatibility with the submarine fleet. The current DDS is a certified diving system which attaches to modified host submarines that provides for insertion of SOF forces and platforms. Funding supports product improvements to the current DDS, as well as associated diver equipment for in-service submarine support systems, unmanned underwater vehicles, and follow on development efforts for future SOF payloads. ***FY 2020 Plans:*** Continue Field Changes necessary to extend useful life of the DDS, transitions from Ship, Submersible, Guided Missile, Nuclear (SSGN) to Virginia (VA) Class host platform, and increases capacity to carry larger payloads. ***FY 2021 Plans:*** Continues Field Changes necessary to extend useful life of the DDS and increases capacity to carry larger payloads. Completes the transition study of the SSGN to VA Class host platform ***FY 2020 to FY 2021 Increase/Decrease Statement:***			

Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S0417 / *Underwater Systems*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
Decrease of $4.072 million is due to the completion of the transition study from the SSGN and VA Class host platform and aligning FY21 Unmanned Underwater Vehicle (UUV) technology integration efforts to the UUV program.			
Title: SOF Combat Diving ***Description:*** SOF Combat Diving provides the EMD, testing, and rapid prototyping of SOF peculiar diving equipment providing the SOF combat diver the ability to engage the enemy and conduct operations. SOF Combat Diving will support the SDV, SWCS, DCS, and surface craft with the conduct of infiltration/extraction, material recovery, underwater ship attack, beach clearance, and other missions. Technologies include, but are not limited to, commercial and developmental life support, maneuverability and propulsion, diver navigational accuracy and situational awareness, environmental protection, and communications between dive teams as well as between divers and external vessels/craft. SOF Combat Diving is designated a MTA program, which uses the rapid prototyping pathway and is executed using existing contracts, government agencies, and new contracts competitively selected as appropriate. ***FY 2020 Plans:*** Continue development, to include test and evaluation for environmental protection, navigation, communication, and propulsion. ***FY 2021 Plans:*** Continues development, to include test and evaluation for environmental protection, navigation, communication, propulsion, and begin shallow water underwater breathing apparatus. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** Increase of $0.045 million supports spiral development of SOF-Peculiar diving system-of-systems approach and integrates the man-carried diving equipment with the Undersea Platforms.	1.984	2.160	2.205
Title: Undersea Craft Mission Equipment (UCME) ***Description:*** UCME provides a rapid response capability to support SOF underwater craft and diver systems, subsystems, and their emerging requirements. UCME provides technology refresh efforts to correct system deficiencies, improve asset life, and enhance mission capability to leverage and exploit emerging technologies within the maritime Special Operations Forces undersea capability portfolio. UCME focuses on spearheading specific Technology Readiness Level (TRL) 6 technology for compatibility, maturity, marinization, and successful transition to SOF undersea craft programs. ***FY 2020 Plans:*** Begin development of undersea survivability enhancements; underwater and maritime domain communications; enhanced situational awareness and Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and	-	17.163	19.692

Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S0417 / *Underwater Systems*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
Reconnaissance (C5/ISR); unique power and energy capabilities; other capability enhancements and enabling technologies for assured access, which supports the National Defense Strategy (NDS). ***FY 2021 Plans:*** Continues development of undersea survivability enhancements; underwater and maritime domain communications; enhanced situational awareness and C5/ISR; unique power and energy capabilities; other capability enhancements and enabling technologies for assured access, which supports the NDS. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** Increase of $2.529 million is due to increased investment in enhanced survivability, navigation, C5ISR/Situational Awareness (SA), power and energy, and other assured access technologies.			
Title: MK18 Mod 1 Unmanned Underwater Vehicle (UUV) ***Description:*** MK 18 Mod 1 UUV enables access to contested / denied areas in the maritime domain, provides Maritime Special Reconnaissance capabilities and reduces risk to personnel and manned platforms. This program develops and integrates SOF-peculiar modifications to the Service Common, MFP-2 funded, Mark 18 Mod 1 UUV. ***FY 2021 Plans:*** Begins payload development/integration for Beyond Line Of Sight (BLOS) capability via cognitive router effort, encrypted communications, underwater launch and recovery, and artificial intelligence. Begins and completes development/integration for Acoustic Intercept Receiver. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** Increase of $1.000 million is due to heightened demand signal for Naval Special Warfare (NSW) undersea capabilities.	-	-	1.000
Title: Combatant Craft Light (CCL) ***Description:*** CCL is a small combatant craft that supports deployment of six combat equipped SOF operators and their payloads for selected missions in multiple threat environments. Its compact form factor provides SOF with versatile mission transportability, deployment, and utility capabilities. ***FY 2021 Plans:*** Completes integration and testing of Low Rate Initial Production (LRIP) craft. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** Increase of $0.348 million is due to integration and testing of LRIP craft.	-	-	0.348
Accomplishments/Planned Programs Subtotals	26.064	42.205	43.154

Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
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	FY 2019	FY 2020
Congressional Add: SOF Combat Diving	-	3.000
FY 2020 Plans: Continue development of SOF Diver propulsion.		
Congressional Adds Subtotals	-	3.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
• PROC/0210US: *Underwater Systems*	128.816	58.991	20.556	-	20.556	18.974	7.219	15.562	15.873	Continuing	Continuing

Remarks

D. Acquisition Strategy

• SWCS used full and open competition with a down select to a single contractor. The full spectrum of contracting activities are being utilized for any integration and subsystem requirements, using existing contracts where appropriate, government agencies, and new contracts as necessary. Sole source Justification and Approval (J&A) was approved and awarded to deliver final production Articles to meet full operational capability (FOC).

• DCS used full and open competition, resulting in the selection of a single prime contractor and award of a Fixed Price Incentive Firm Target contract for three vessels. DCS-Block II begins market research in FY 2020.

• The DDS is currently in sustainment through a maintenance and service contract which was competitively sourced, and awarded for a five-year period. The modernization and engineering/change efforts for the six DDS in inventory are executed utilizing the existing services contract.

• SOF Combat Diving is designated an MTA program which supports rapid prototyping and is executed using existing contracts, government agencies, and new contracts competitively selected as appropriate.

• UCME will use streamlined Federal Acquisition Regulation (FAR) contracting with existing or planned Indefinite Delivery, Indefinite Quantity (IDIQ), Blanket Order Agreement (BOA), University Affiliated Research Center (UARC), and Federally Funded Research and Development Center (FFRDC) contracts and use Non-FAR Acquisition Authorities and Other Transaction Authority (OTA) agreements, where appropriate.

• UUV will procure an existing service common man-portable UUV and augment it with purpose built, modular, plug-and-play sensors and payloads to meet SOF requirements.

• CCL engineering and manufacturing development was sole source. Program Management Office (PMO) is evaluating limited competition for follow-on production contract contingent on cost tradeoffs and completeness of technical data.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command			Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / *Maritime Systems*	Project (Number/Name) S0417 / *Underwater Systems*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Shallow Water Combat Submersible (SWCS) Engineering Changes	C/Various	Various : Various	-	1.197	Jan 2019	1.191	Jan 2020	1.203	Jan 2021	-		1.203	Continuing	Continuing	-
Dry Combat Submersible (DCS) Block II EMD	C/Various	Various : Various	-	-		2.986	Feb 2020	5.500	Feb 2021	-		5.500	Continuing	Continuing	-
DCS Enhancements / Planning, Performance, Process and Innovative Solutions (P3I) Changes	C/Various	Various : Various	9.418	1.998	Nov 2018	4.589	Nov 2019	7.242	Nov 2020	-		7.242	Continuing	Continuing	-
DCS Engineering & Manufacturing Development (EMD)	C/FPIF	Lockheed Martin : Riviera Beach, FL	65.858	2.224	Dec 2018	-		-		-		-	0.000	68.082	-
DCS Depressurization Pump/Signature Management/Modeling and Simulation/Risk Mitigation (Congressional add)	C/Various	Various : Various	14.100	-		-		-		-		-	0.000	14.100	-
DCS Technologies Government Furnished Equipment	C/Various	Various : Various	40.753	0.100	Nov 2018	-		-		-		-	0.000	40.853	-
Dry Deck Shelter (DDS) Modernization	C/CPFF	Oceaneering International Inc. Marine Services Division : Chesapeake, VA	26.999	7.899	Jan 2019	4.950	Jan 2020	-		-		-	0.000	39.848	-
DDS Field Changes	C/Various	Oceaneering International Inc. Marine Services Division : Chesapeake, VA	-	-		-		0.872	Jan 2021	-		0.872	Continuing	Continuing	-
Special Operation Forces (SOF) Combat Diving-Unique Diving Technologies	Various	Various : Various	4.942	1.302	Apr 2019	1.464	Nov 2019	1.502	Feb 2021	-		1.502	Continuing	Continuing	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command			Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / *Maritime Systems*	Project (Number/Name) S0417 / *Underwater Systems*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Undersea Craft Mission Equipment (UCME) Survivability, Navigation, C5ISR/SA, Power & Energy enhancements and other assured access technologies	C/Various	Various : Various	-	-		16.360	Feb 2020	19.101	Dec 2020	-		19.101	Continuing	Continuing	-
MK18 Mod 1 Unmanned Underwater Vehicle (UUV)	C/Various	Various : Various	-	-		-		1.000	Mar 2021	-		1.000	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	202.681	-		-		-		-		-	0.000	202.681	-
		Subtotal	364.751	14.720		31.540		36.420		-		36.420	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Funding	Various	Various : Various	9.094	-		-		-		-		-	0.000	9.094	-
		Subtotal	9.094	-		-		-		-		-	0.000	9.094	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SWCS	Various	PSU ARL / JHU-APL : Laurel, MD / State College, PA	3.192	0.200	Nov 2018	0.204	Nov 2019	0.208	Nov 2020	-		0.208	Continuing	Continuing	-
DCS	C/Various	NAVSEA / CRANE : Crane, IN	11.831	7.769	Nov 2018	9.254	Nov 2019	4.550	Oct 2020	-		4.550	Continuing	Continuing	-
SOF Combat Diving	Various	Various : Various	1.130	0.491	Mar 2019	0.520	Oct 2019	0.520	Oct 2020	-		0.520	Continuing	Continuing	-
UCME	C/Various	Various : Various	-	-		0.275	Jun 2020	-		-		-	0.000	0.275	-
CCL	C/Various	Various : Various	-	-		-		0.348	Dec 2020	-		0.348	0.000	0.348	-
Prior Year Funding	Various	Various : Various	9.320	-		-		-		-		-	0.000	9.320	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command			Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / *Maritime Systems*	Project (Number/Name) S0417 / *Underwater Systems*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	25.473	8.460		10.253		5.626		-		5.626	Continuing	Continuing	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DCS	Various	Booz Allen Hamilton : Tampa, FL	17.048	2.371	Apr 2019	2.380	Apr 2020	-		-		-	0.000	21.799	-
DDS	Various	NAVSEA : Washington, DC	1.679	0.322	Jan 2019	0.328	Jan 2020	0.334	Jan 2021	-		0.334	Continuing	Continuing	-
UCME	C/Various	Various : Various	-	-		0.528	Apr 2020	0.591	Dec 2020	-		0.591	Continuing	Continuing	-
SOF Combat Diving	C/Various	Booz Allen Hamilton : Tampa, FL	0.170	0.191	Dec 2018	0.176	Dec 2019	0.183	Dec 2020	-		0.183	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	9.331	-		-		-		-		-	0.000	9.331	-
		Subtotal	28.228	2.884		3.412		1.108		-		1.108	Continuing	Continuing	N/A

	Prior Years	FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	427.546	26.064		45.205		43.154		-		43.154	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S0417 / *Underwater Systems*

Shallow Water Combat Submersible (SWCS) PEO-Managed Schedule

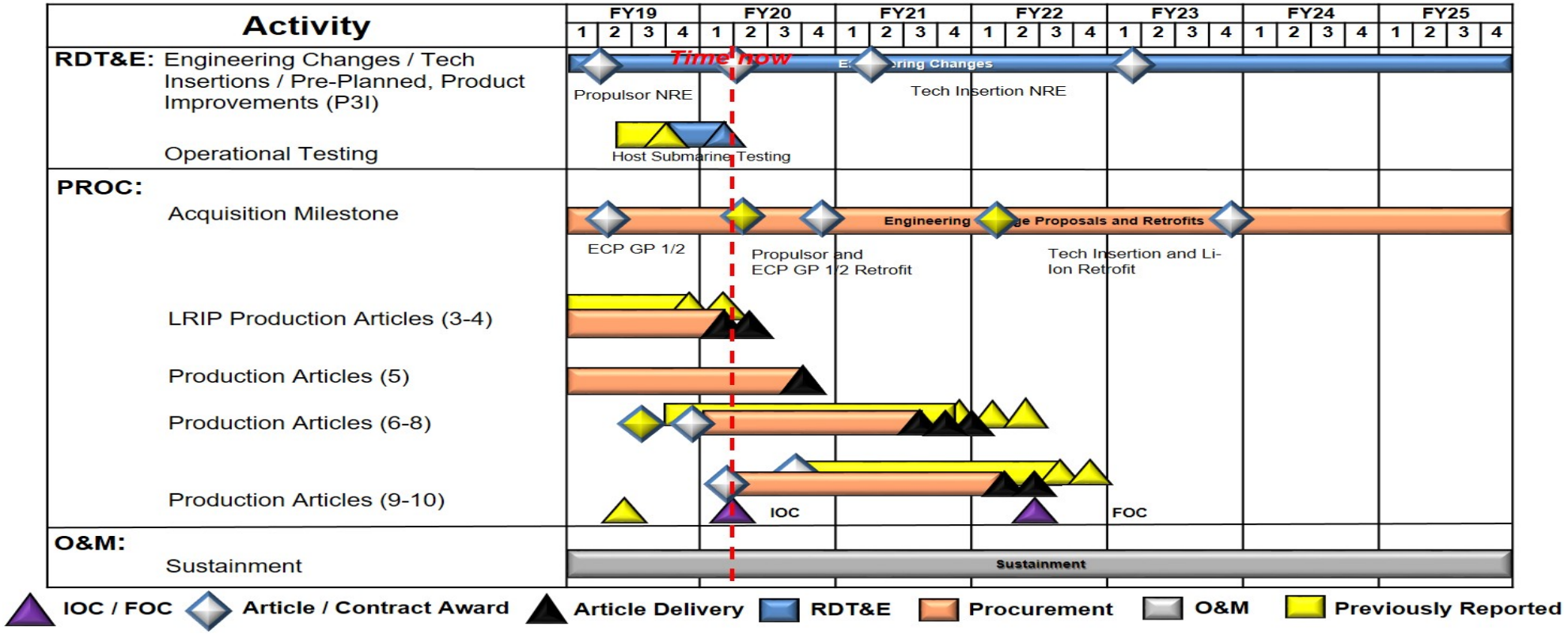

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S0417 / *Underwater Systems*

Dry Combat Submersible (DCS) PEO-Managed Schedule

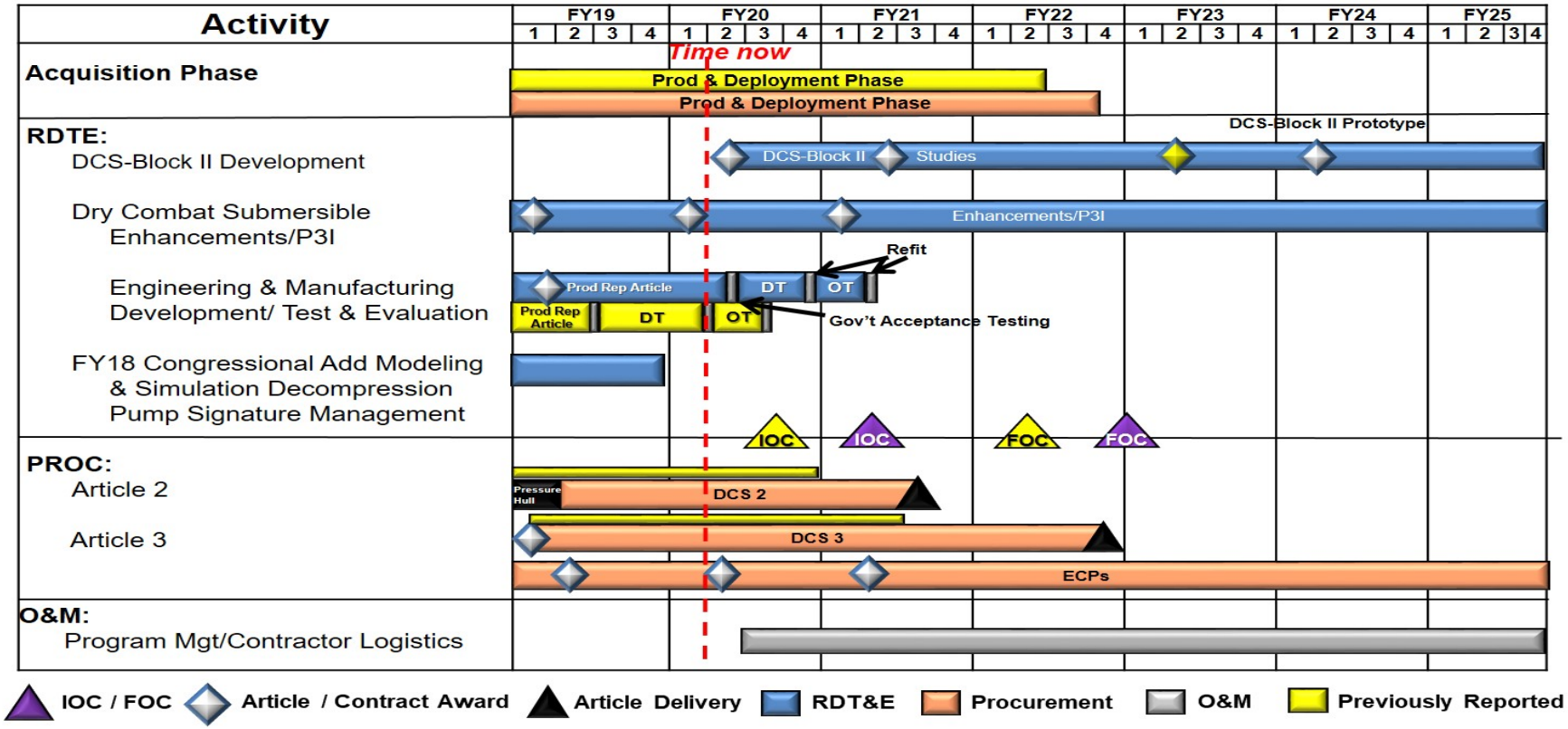

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S0417 / *Underwater Systems*

Dry Deck Shelter (DDS)
PEO-Managed Schedule

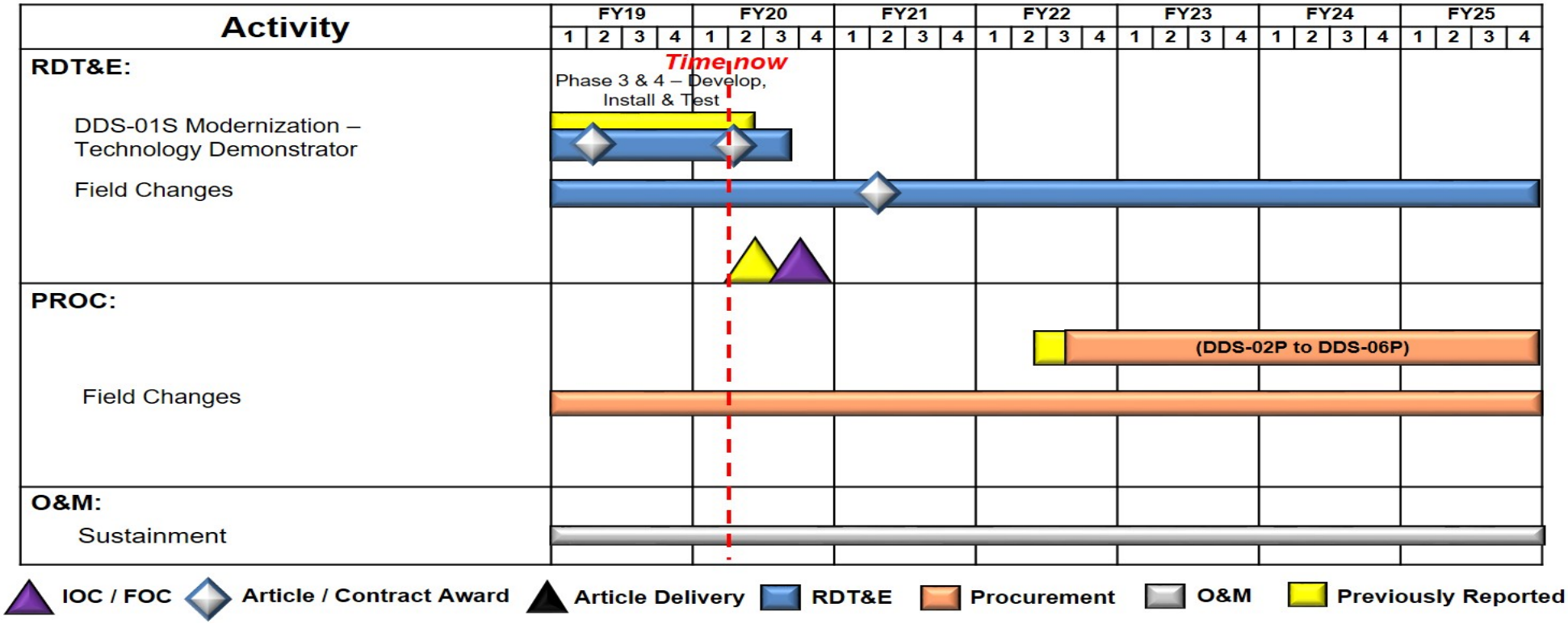

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S0417 / *Underwater Systems*

Special Operations Forces (SOF) Combat Diving PEO-Managed Schedule

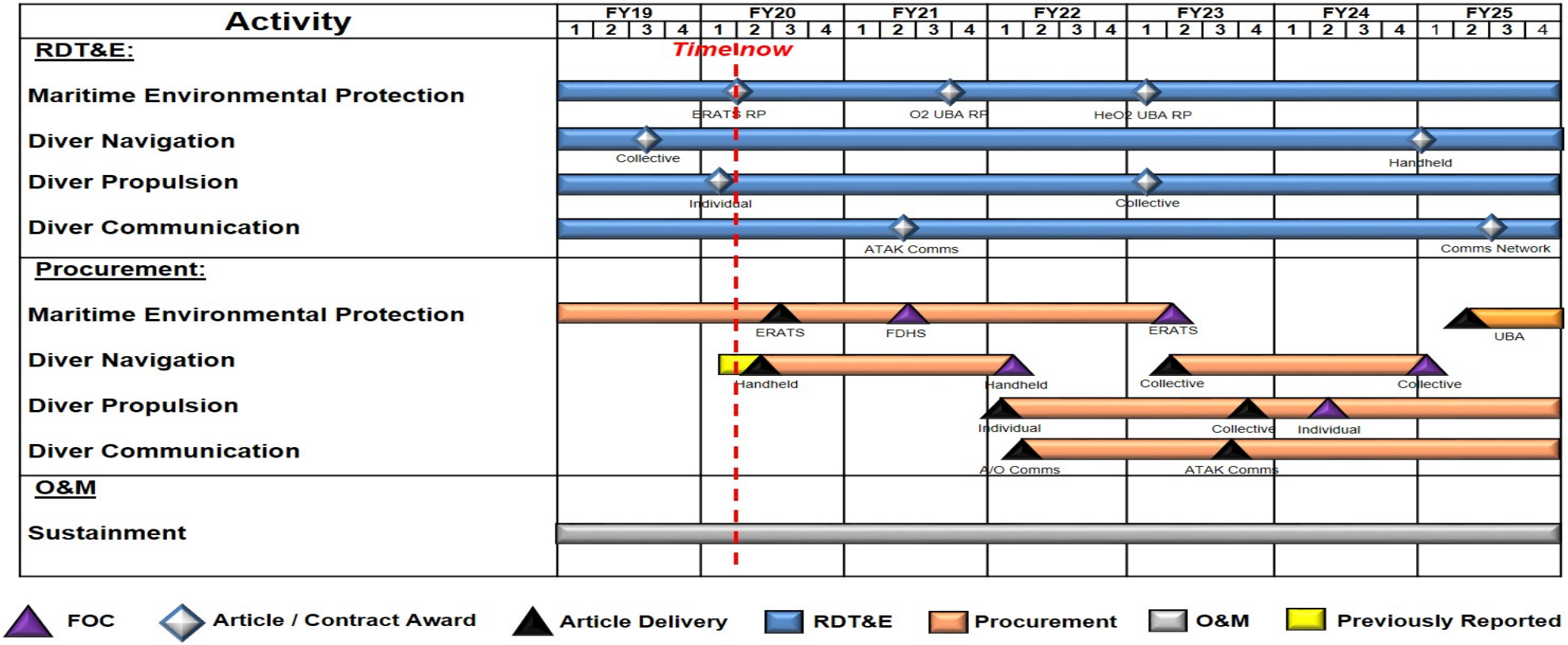

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S0417 / *Underwater Systems*

Undersea Craft Mission Equipment (UCME) PEO-Managed Schedule

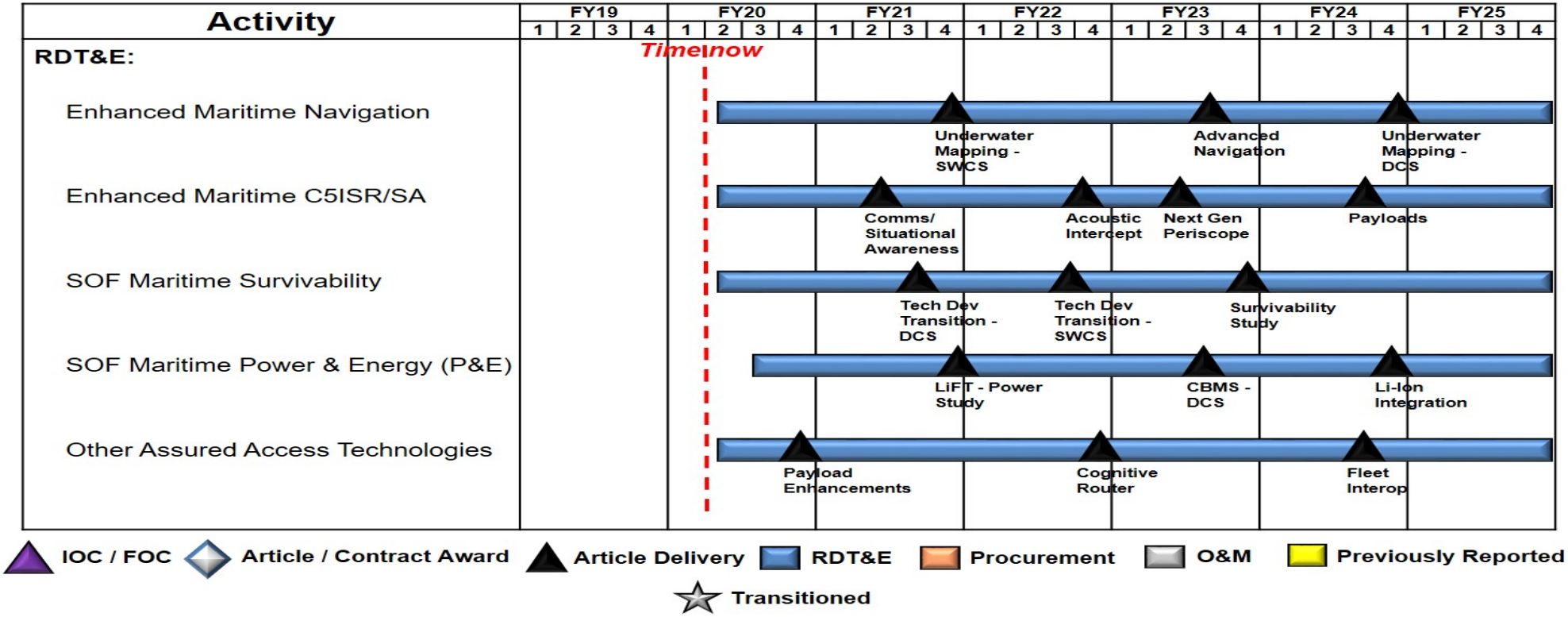

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S0417 / *Underwater Systems*

Mk 18 Mod 1 Unmanned Underwater Vehicle (UUV) PEO-Managed Schedule

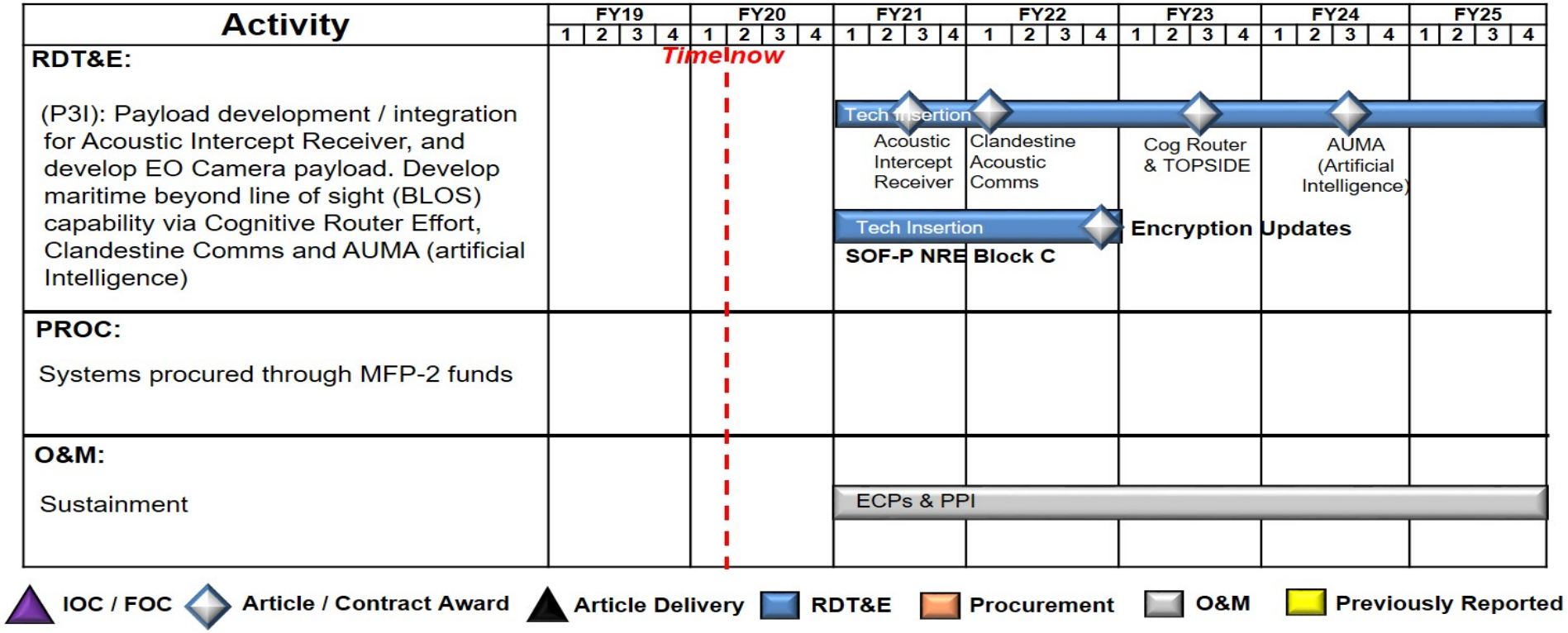

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S0417 / *Underwater Systems*

Combatant Craft Light (CCL)
PEO-Managed Schedule

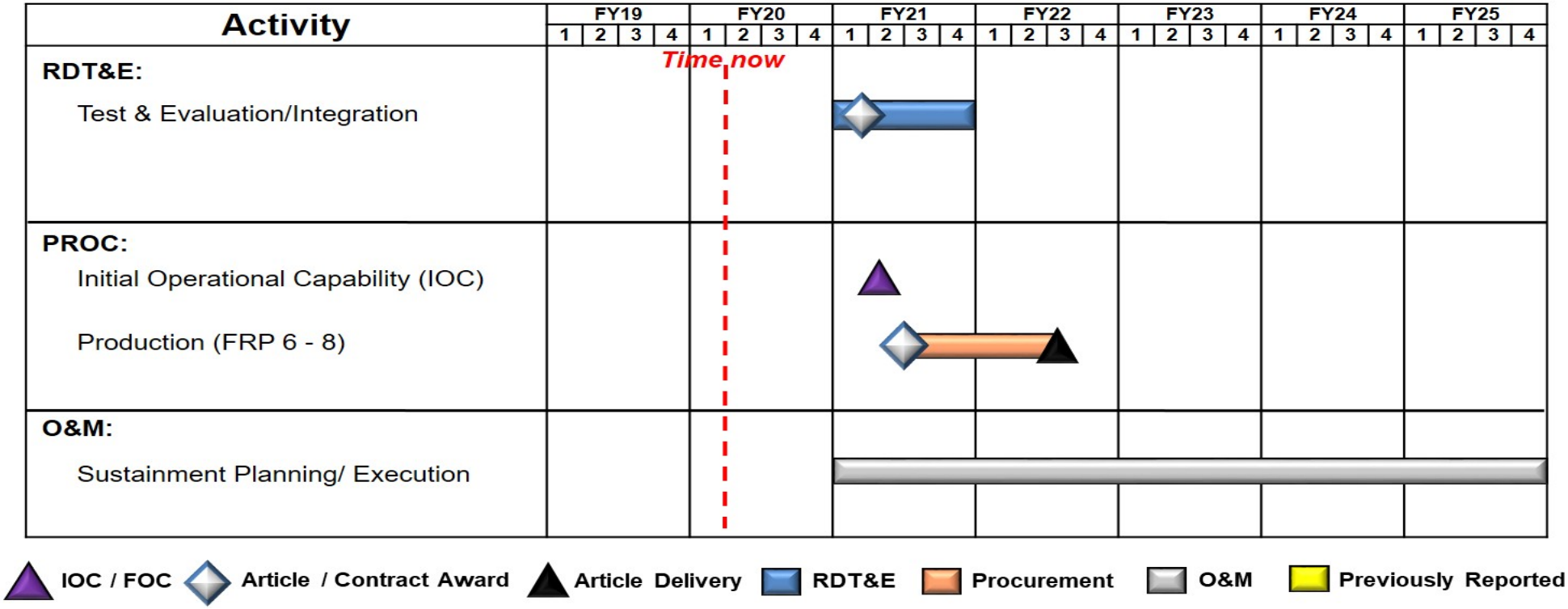

Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S0417 / *Underwater Systems*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Shallow Water Combat Submersible (SWCS)				
Enhancements/ Preplanned Product Improvements (P3I)	1	2019	4	2025
Operational Testing	4	2019	1	2020
Dry Combat Submersibles (DCS)				
DCS Block II	2	2020	4	2025
Enhancements/ P3I	1	2019	4	2025
Production Representative Article (Engineering and Manufacturing Development)	1	2019	2	2020
Developmental Test and Evaluation	2	2020	4	2020
Operational Test and Evaluation	4	2020	2	2021
Dry Deck Shelter Modernization (DDS)				
Phase 3 & 4 Development	1	2019	3	2020
Field Changes	1	2019	4	2025
Special Operation Forces (SOF) Combat Diving				
Maritime Environmental Protection Rapid Prototyping, Test, and Integration	1	2019	4	2025
Diver Navigation Rapid Prototyping, Test, and Integration	1	2019	4	2025
Diver Propulsion Rapid Prototyping, Test, and Integration	1	2019	4	2025
Diver Communication Rapid Prototyping, Test, and Integration	1	2019	4	2025
Undersea Craft Mission Equipment (UCME)				
Enhanced Maritime Navigation	2	2020	4	2025
Enhanced Maritime C5ISR/SA	2	2020	4	2025
SOF Maritime Survivability	2	2020	4	2025
SOF Maritime Power & Energy (P&E)	3	2020	4	2025
Other Assured Access Technologies	2	2020	4	2025

Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S0417 / *Underwater Systems*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
MK18 Mods 1 Unmanned Underwater Vehicle (UUV)				
MK18 Mods 1 Unmanned Underwater Vehicle (UUV) P3I	1	2021	4	2025
Tech Insertion	1	2021	4	2022
Combatant Craft Light (CCL)				
Test and Evaluation / Integration	1	2021	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command			Date: February 2020
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / *Maritime Systems*	Project (Number/Name) S1684 / *Surface Craft*	

COST ($ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
S1684: *Surface Craft*	41.118	14.536	27.421	16.728	-	16.728	13.045	10.231	10.049	9.928	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for engineering and manufacturing development of small, medium, heavy, and assault surface combatant craft, combatant craft mission equipment, and Pre-Planned Product Improvement (P3I) and technology insertion engineering changes to meet the unique requirements of Special Operations Forces (SOF). This project also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to quickly respond to new requirements for maritime craft and subsystems. The craft capabilities and unique equipment provide small, highly trained forces the ability to successfully conduct operations associated with SOF maritime missions.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
Title: Combatant Craft Medium (CCM)	1.629	2.917	2.243
Description: CCM is a semi-enclosed multi-mission combatant craft for platoon-size maritime mobility in maritime contested environments. It is multi-mission capable, including Maritime Interdiction, Insert / Extract, and Visit, Board, Search, and Seizure (VBSS) Operations. CCM is Naval Special Warfare's (NSW) craft-of-choice for long-range, high-payload SOF mobility operations in contested environments. CCM has NSW's best Iron Triangle: 40 knot (kt) speed; 4 crew + 19 passengers (pax)/10,000 pound (lb) payload; and 600 nautical miles (nm) range. CCM payload capacity enables inclusion of shock mitigating seats, which is critical for ride quality, operator tactical readiness, and operator health. At 60 feet long, CCM is C-17 / C5 transportable and can launch/recover by well deck or shore based trailer.			
FY 2020 Plans: Begin survivability enhancements, MK 50 remote weapon system integration, and Command, Control, Communications, Computers, Combat Systems, Intelligence, Surveillance, and Reconnaissance (C5ISR) upgrades, and complete integration of the Joint Threat Warning System (JTWS). Begin aft enclosure development and testing.			
FY 2021 Plans: Continues survivability enhancements, MK 50 integration, and C5ISR upgrades. Continues aft enclosure development and testing.			
FY 2020 to FY 2021 Increase/Decrease Statement: Decrease of $0.674 million is due to completion of JTWS integration.			
Title: Combatant Craft Heavy (CCH)	0.586	3.956	0.925
Description: CCH represents a family of solutions that provides platoon-size maritime surface mobility. The current CCH is the Sea, Air, Land Insertion, Observation, and Neutralization (SEALION) craft. SEALION is a fully-enclosed, climate-controlled,			

Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
semi-submersible craft that operates in contested environments. SEALION is NSW's most versatile and survivable combatant craft and the craft-of-choice for sensitive maritime intelligence, surveillance, and reconnaissance missions. Iron Triangle: 40 kt speed; 7 crew + 12 pax / 3,300 lb payload; and 400 nm range. SEALION payload capacity enables inclusion of shock mitigating seats, which is critical for ride quality, operator tactical readiness, and operator health. At 77+ feet long, SEALION is C-17/C-5 transportable and can launch/recover by well deck, shore based mobile travel lift, or crane. ***FY 2020 Plans:*** Continue development and integration of upgraded situational awareness enhancement and begin design and development of tech data package for CCH - (replacement of 1 and 2). ***FY 2021 Plans:*** Continues development and integration of upgraded situational awareness enhancement and integration of JTWS. Continues development of tech data package for CCH - (replacement of 1 and 2). ***FY 2020 to FY 2021 Increase/Decrease Statement:*** Decrease of -$3.031 million is due to USSOCOM performing a comprehensive analysis of future capabilities and is reducing Combat Craft Heavy (CCH) program to better align with the Department's priorities as outlined in the National Defense Strategy.			
Title: Combatant Craft Mission Equipment (CCME) ***Description:*** CCME provides a rapid response capability to support SOF combatant craft systems, subsystems, and their emerging requirements. CCME provides technology refresh efforts to correct system deficiencies, improve asset life, and enhance mission capability. CCME focuses on spearheading specific Technology Readiness Level (TRL) 6 technology for compatibility, maturity, marinization, and successful transition to SOF combatant craft programs. ***FY 2020 Plans:*** Continue evaluation of candidate solutions for technology development including shock mitigation, family of antennas, situational awareness, Maritime Tactical Mission Network (MTMN), and enhanced Global Positioning System (GPS). Begin evaluation of candidate solutions for Digital Radar. Expand investment in enhanced survivability, navigation, Computers, Intelligence, Surveillance, and Reconnaissance Systems (C5ISR)/Situational Awareness (SA), power & energy, and other assured access technologies. Continue Link 16 integration. ***FY 2021 Plans:*** Continues evaluation of candidate solutions for technology development including shock mitigation, family of antennas, situational awareness, MTMN and enhanced GPS. Continues development, to include test and evaluation of solution for Digital Radar.	3.794	6.490	7.381

Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S1684 / *Surface Craft*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
Expands investment in enhanced survivability, navigation, C5ISR/SA, power & energy, and other assured access technologies. Continues Link 16 integration. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** Increase of $0.891 million is due to increased investment in enhanced survivability, navigation, C5ISR/SA, power and energy, and other assured access technologies.			
Title: Combatant Craft Assault (CCA) ***Description:*** CCA is a combatant craft for squad-size maritime mobility operations in contested environments. CCA is NSW's best craft for Visit, Board, Search, and Seizure (VBSS). It is the craft-of-choice for maritime interdiction and boarding operations because of the open deck space, maneuverability, and interoperability with an Afloat Forward Staging Base. Iron Triangle: 40 kt speed; 3 crew + 12 pax/5,000 lb payload; and 300 nm range. At 41 feet long, CCA is air transportable by C-130/C-17/C-5 and can launch/recover by crane, davit, well deck, or shore based trailer. ***FY 2020 Plans:*** Continue integration and testing of Combatant Craft Forward Looking Infrared Radar (CCFLIR2) mast design and Comms Box/ Tactical Operations Center Intercommunications System (TOCNET). ***FY 2021 Plans:*** Continues integration and testing of CCFLIR2 mast design and Comms box/TOCNET. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** Increase of $0.011 million is due to minor adjustments.	1.033	0.521	0.532
Title: Maritime Precision Engagement (MPE) ***Description:*** MPE is a family of standoff, loitering, man-in-the-loop weapons systems deployed on combatant craft and capable of targeting individuals, groups, vehicles, high value targets, and small oceangoing craft with low collateral damage. MPE consists of combatant craft alterations, integration of the MK 50 Remote Weapon System (RWS), and munition launcher systems. Munitions for this effort are funded through PEO SOF Warrior. The MK 50 RWS consists of a MK 50 RWS and a M2 .50 Cal heavy machine gun that provides stabilized accurate fire from the bow of the CCM. ***FY 2020 Plans:*** Continue design and development of craft modifications such as bow hatches that preserve survivability, launcher system components, and the operator control station. Efforts will include the final design, integration and testing of the MPE Engineering Development Module (EDM) for the MK 50 RWS. Continued work on a government-controlled architecture and interfaces for the munition launcher, munition datalink/antennae requirements, and associated control systems which will include drafting of interface control documents. Finalize the CCM MPE A-kit design for installation on the CCM test article, representing a major	6.740	13.537	5.647

Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2019	FY 2020	FY 2021
modification to the bow of the CCM. The final MPE A-kit design will support both the munition launcher and the MK 50 RWS, allowing both to be stowed below the deck of the CCM bow when not in use. ***FY 2021 Plans:*** Continues detailed design and development of craft modifications, a MK 50 RWS production representative article, and operator control station to develop a fully integrated operational capability. Continues prototype development and initial testing of the munition launcher B-Kit to produce an MPE launcher EDM for installation on the CCM test article. Additional work will be performed in the design and subsequent integration of similar MPE launcher capabilities into the Combatant Craft Heavy platform. ***FY 2020 to FY 2021 Increase/Decrease Statement:*** Decrease of $7.890 million is due to completion of MK 50 RWS EDM.			
Title: Combatant Craft Forward Looking Infrared (CCFLIR) System ***Description:*** The CCFLIR program consists of a legacy CCFLIR and the CCFLIR2. The CCFLIR capability provides Special Operations Forces (SOF) with a multi-sensor, electro-optic system that enhances SOF effectiveness by improving their ability to detect, recognize, identify, range, track, and highlight objects of interest in a maritime environment. The legacy CCFLIR is under sustainment and is currently used on CCA, CCM, and Special Operations Craft Riverine (SOCR).	0.754	-	-
Accomplishments/Planned Programs Subtotals	14.536	27.421	16.728

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
• PROC/0204SCCS: *Combatant Craft Systems*	19.069	48.462	17.278	-	17.278	36.876	45.239	24.415	25.479	Continuing	Continuing

Remarks

N/A

D. Acquisition Strategy

• CCM was a two-phase source selection process. Phase I involved a Small Business Set-Aside competition for two vendors to design, build and deliver test articles. Phase II selected a single vendor to provide a fully integrated baseline craft system for test and evaluation with options for production, engineering support, and contractor logistics support.

• CCH SEALION I & II were transitioned from United States Navy advanced technology demonstrator craft to USSOCOM. Sustainment for SEALION I & II is conducted via Special Operations Forces Support Activity (SOFSA). SEALION III is Sole Source to the Original Equipment Manufacturer (OEM) in order to take advantage of previous Government investments in manufacturing infrastructure for SEALION I & II.

Exhibit R-2A, RDT&E Project Justification: PB 2021 United States Special Operations Command		Date: February 2020
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• CCME will use streamlined Federal Acquisition Regulation (FAR) contracting with existing or planned Indefinite Delivery, Indefinite Quantity (IDIQ), Blanket Order Agreement (BOA), University Affiliated Research Center (UARC), and Federally Funded Research and Development Center (FFRDC) contracts and use Non-FAR Acquisition Authorities and Other Transaction Authority (OTA) agreements, where appropriate.

• CCA will continue to develop, test, and integrate capability enhancements required to increase the crafts performance characteristics, reliability, and survivability.

• MPE will employ Government engineering expertise and lessons learned to develop a common launch system for NSW combatant craft. Munitions selection will be executed as an MTA to meet program requirements.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command			Date: February 2020
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Combat Craft Medium (CCM)	C/Various	Various : Various	15.040	1.629	Nov 2018	2.917	Nov 2019	2.243	Nov 2020	-		2.243	Continuing	Continuing	-
Combatant Craft Heavy (CCH)	C/Various	Various : Various	6.194	0.586	Jan 2019	3.956	Jan 2020	0.925	Jan 2021	-		0.925	Continuing	Continuing	-
Combat Craft Mission Equipment (CCME)	C/Various	Various : Various	4.905	3.554	Nov 2018	5.701	Nov 2019	7.381	Nov 2020	-		7.381	Continuing	Continuing	-
Combatant Craft Assault (CCA)	C/Various	NSWC-Carderock : Norfolk, VA	1.089	1.033	Nov 2018	0.521	Nov 2019	0.532	Nov 2020	-		0.532	Continuing	Continuing	-
Maritime Precision Engagement (MPE)	C/Various	NSWC : Dahlgren, VA	-	6.743	Dec 2018	13.333	Dec 2019	5.437	Dec 2020	-		5.437	Continuing	Continuing	-
Combatant Craft Forward Looking Infrared (CCFLIR) System	C/Various	Various : Various	-	0.754	May 2020	-		-		-		-	0.000	0.754	-
Prior Year Costs	C/Various	Various : Various	6.461	-		-		-		-		-	0.000	6.461	-
		Subtotal	33.689	14.299		26.428		16.518		-		16.518	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CCME	C/Various	Various : Various	1.498	0.237	Nov 2018	0.239	Nov 2019	-		-		-	0.000	1.974	-
Prior Year Costs	C/Various	Various : Various	2.395	-		-		-		-		-	0.000	2.395	-
		Subtotal	3.893	0.237		0.239		-		-		-	0.000	4.369	N/A

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CCME	C/Various	Various : Various	-	-		0.550	Nov 2019	-		-		-	0.000	0.550	-
MPE	C/Various	Various : Various	-	-		0.204	Dec 2019	0.210	Dec 2020	-		0.210	Continuing	Continuing	-
Prior Year Costs	C/Various	Various : Various	3.536	-		-		-		-		-	0.000	3.536	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 United States Special Operations Command			Date: February 2020
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2019 Cost	FY 2019 Award Date	FY 2020 Cost	FY 2020 Award Date	FY 2021 Base Cost	FY 2021 Base Award Date	FY 2021 OCO Cost	FY 2021 OCO Award Date	FY 2021 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	3.536	-		0.754		0.210		-		0.210	Continuing	Continuing	N/A

	Prior Years	FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	41.118	14.536		27.421		16.728		-		16.728	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
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Combatant Craft Medium (CCM)
PEO-Managed Schedule

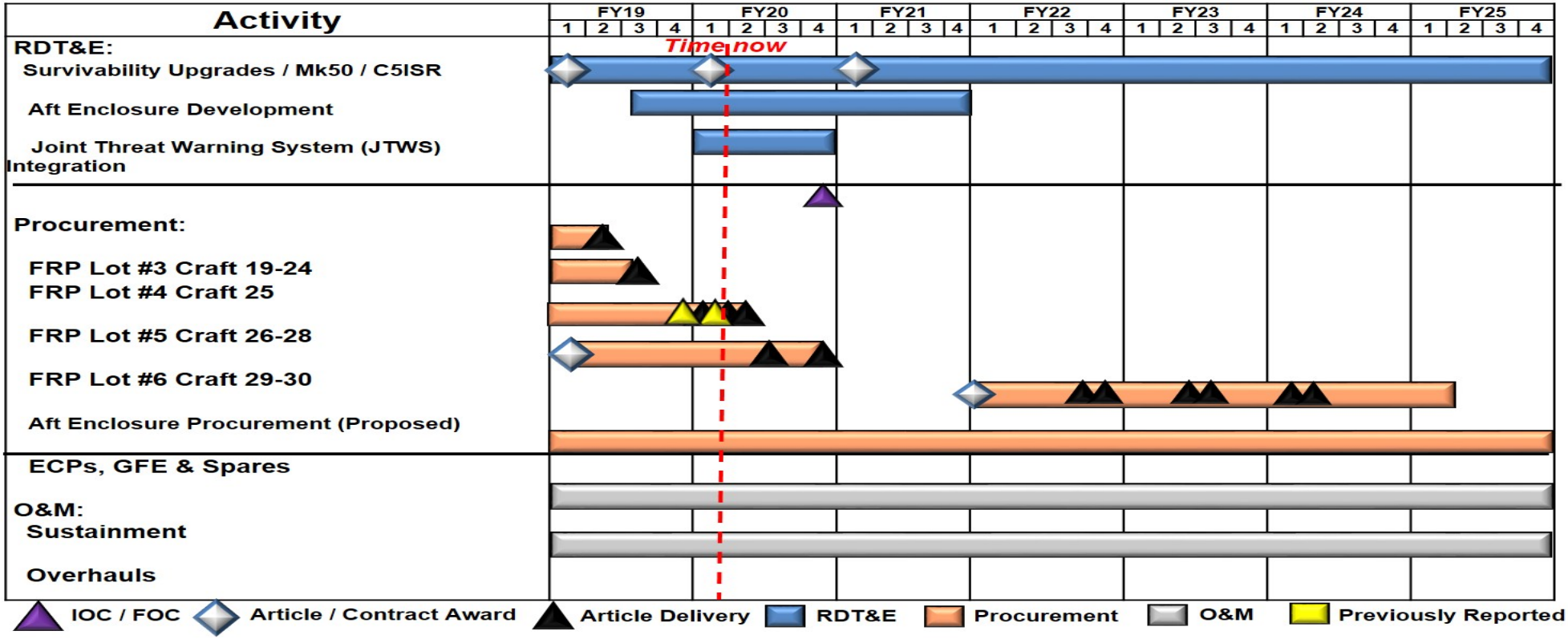

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S1684 / *Surface Craft*

Combatant Craft Heavy (CCH)
PEO-Managed Schedule

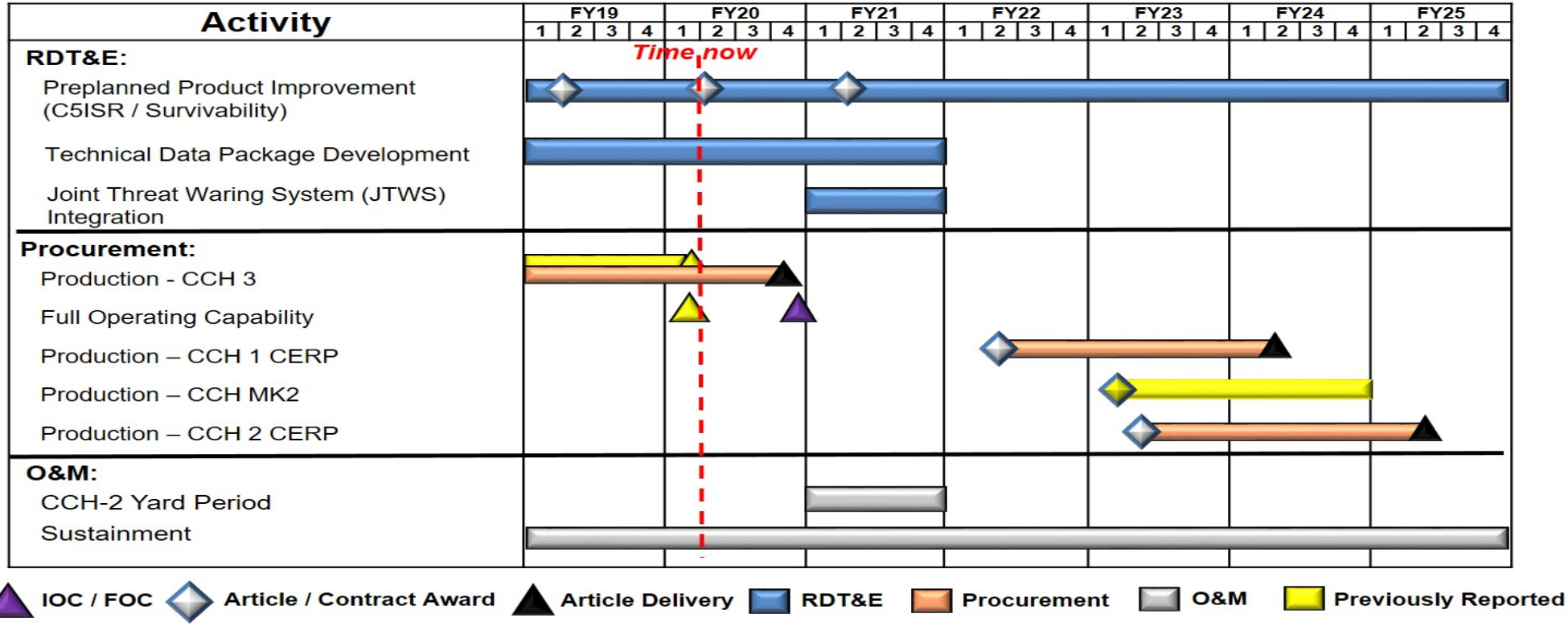

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S1684 / *Surface Craft*

Combatant Craft Mission Equipment (CCME) PEO-Managed Schedule

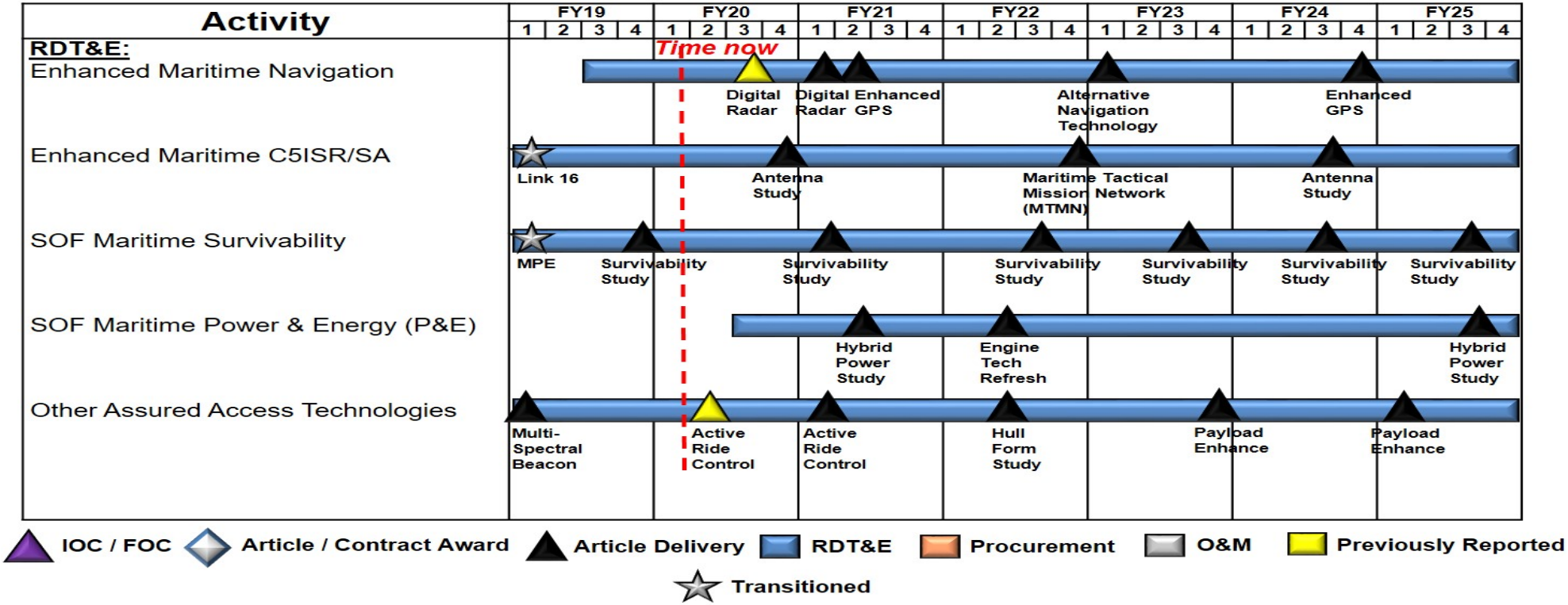

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S1684 / *Surface Craft*

Combatant Craft Assault (CCA)
PEO-Managed Schedule

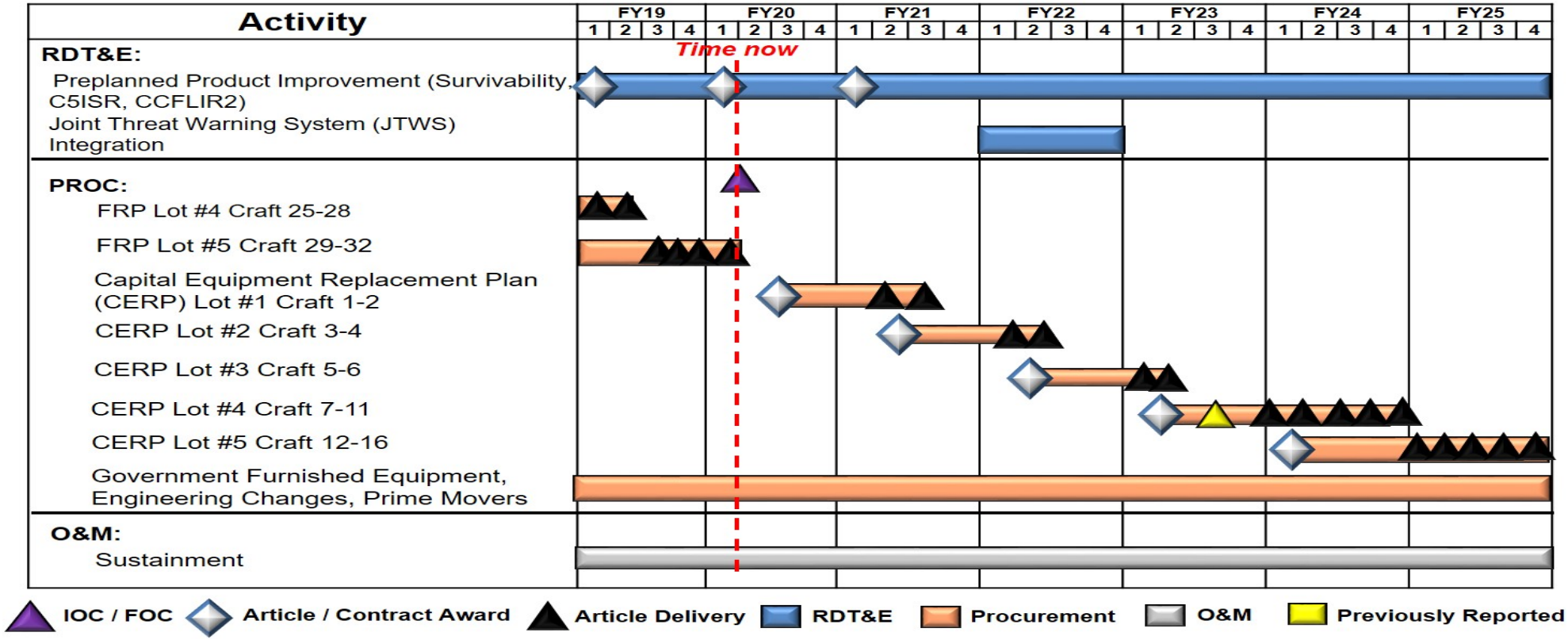

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S1684 / *Surface Craft*

Maritime Precision Engagement (MPE) PEO-Managed Schedule

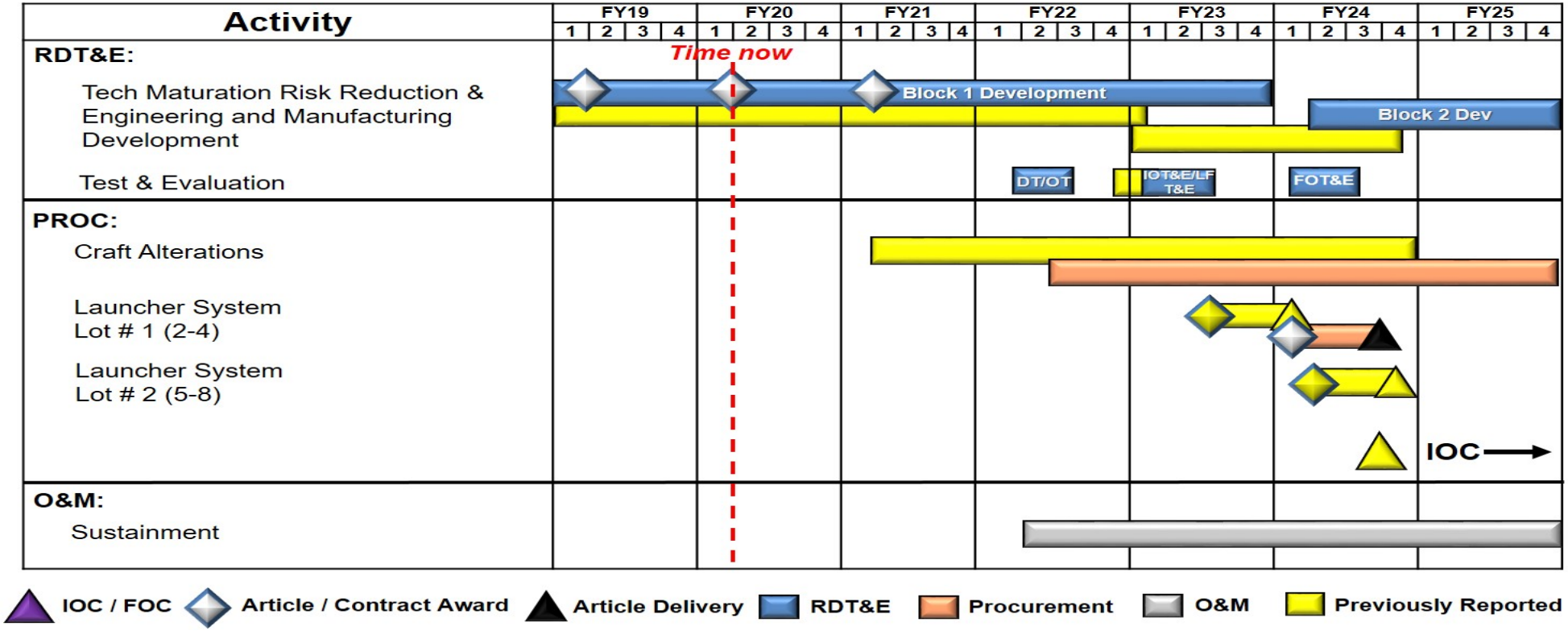

Exhibit R-4, RDT&E Schedule Profile: PB 2021 United States Special Operations Command		Date: February 2020
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Combatant Craft Forward Looking Infrared 2 (CCFLIR) PEO-Managed Schedule

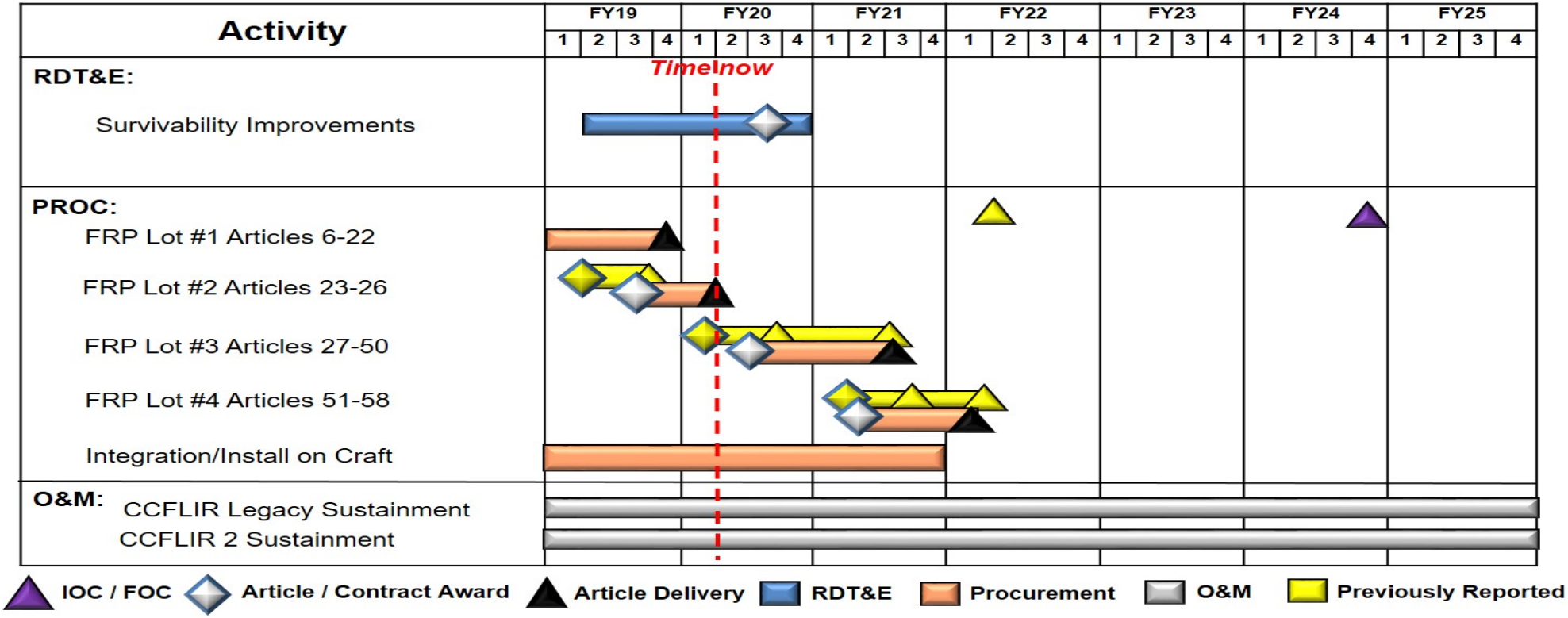

Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command		Date: February 2020
Appropriation/Budget Activity 0400 / 7	**R-1 Program Element (Number/Name)** PE 1160483BB / *Maritime Systems*	**Project (Number/Name)** S1684 / *Surface Craft*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Combatant Craft Medium (CCM)				
Weapons, Survivability, C5ISR, Combatant Craft Forward Looking Infrared (CCFLIR2), and MK50	1	2019	4	2025
Aft Enclosure Development	3	2019	4	2021
Joint Threat Warning System (JTWS) integration	1	2020	4	2020
Combatant Craft Heavy (CCH)				
Preplanned Product Improvement (Weapons / C5ISR / Survivability)	1	2019	4	2025
Technical Data Package Development	1	2019	4	2021
Joint Threat Warning System (JTWS) integration	1	2021	4	2021
Combatant Craft Mission Equipment (CCME)				
Enhanced Maritime Navigation	3	2019	4	2025
Enhanced Maritime C5ISR/SA	1	2019	4	2025
SOF Maritime Survivability	1	2019	4	2025
SOF Maritime Power & Energy (P&E)	3	2020	4	2025
Other Assured Access Technologies	1	2019	4	2025
Combatant Craft Assault (CCA)				
Preplanned Product Improvement (Survivability, Weapons, C5ISR, CCFLIR2)	1	2019	4	2025
Joint Threat Warning System (JTWS) Integration	1	2022	4	2022
Maritime Precision Engagement (MPE)				
Block I Technology Maturation and Risk Reduction (TMRR) and Engineering and Manufacturing Development (EMD)	1	2019	4	2023
Block II TMRR and EMD	2	2024	4	2025
Developmental Test/Operational Test	1	2022	3	2022

Exhibit R-4A, RDT&E Schedule Details: PB 2021 United States Special Operations Command		Date: February 2020
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Initial Operational Test and Evaluation/Live Fire Test and Evaluation	1	2023	3	2023
Follow-On Operational Test and Evaluation Test and Evaluation	1	2024	3	2024
Combatant Craft Forward Looking Infrared System (CCFLIR)				
Survivability Improvements	2	2019	4	2020